Responses to Comments in Letter 107 from Fred and Laurie Hoekstra, Abbotsford Residents

Note: The responses listed below are numbered to correspond to the numbers shown in the right-hand margin of the preceding comment letter.

1. Thank you for your comments.

2. Different types of data were used to characterize existing air quality conditions, and in the dispersion modeling.

   Monitoring data collected from 1996 through 1998 at the station located in Abbotsford were used to characterize existing air quality. Data from this monitoring station were used to characterize existing air quality to which incremental impacts due to the proposed project were added. Five years of meteorological data from the Abbotsford Airport (e.g., wind speeds, temperature profiles, etc.) were used in the computer modeling to simulate dispersion of air emissions from the proposed facility.

   The air quality analysis was based on data from the Abbotsford monitoring station because it is the closest station to the proposed project site. The Chilliwack and Hope stations are approximately 20 miles and 50 miles east of Abbotsford, respectively. Following publication of the Draft EIS, air quality monitoring data from Chilliwack and Hope were evaluated and compared with the monitoring data from Abbotsford used in the air quality analyses. For the same time frames (1996 through 1999) and for the same constituents (NO2, CO, PM10, and ozone), the existing air contaminant concentrations in Chilliwack and Hope were less than or equal to those reported in Abbotsford (letter from David Weeks, Sumas Energy 2 – PSD Hearing Bench Request, October 16, 2000). Therefore, the data used in analyses were more representative of local conditions than would have been the data from either Chilliwack or Hope. In addition, since the ambient concentrations were higher at the Abbotsford station, the impact analyses were worst-case with respect to the incremental impact of the proposed project.

3. Please see Letter 9, Response to Comment 5 for a discussion of the best available control technology (BACT) determination process and how it applies to the proposed project. If the facility were determined to be in noncompliance with its operating permit, the Energy Facility Site Evaluation Council and the U.S. Environmental Protection Agency would have enforcement responsibilities.

4. Please see Letter 9, Response to Comment 5 for a discussion of the BACT determination process.

5. A detailed air quality impact assessment was prepared for this project including a determination of the potential impacts to the Lower Fraser Valley. Please see Letter 3, Response to Comment 2.

6. The United States federal standards (National Ambient Air Quality Standards), Washington State standards (Washington Ambient Air Quality Standards), as well as the

provincial British Columbia air quality objectives were used to assess potential impacts associated with the proposed project. Table 3.1-2 of the Final EIS summarizes and compares existing air quality against the NAAQS, WAAQS, and Canadian objectives. Similarly, Table 3.1-7 of the Final EIS compares predicted emissions from the proposed facility against all three sets of standards. Also, please see Letter 3, Response to Comment 2 for a discussion of air quality impacts in the Lower Fraser Valley and the impacts of the proposed facility when compared with the Canadian air quality objectives.

7. Thank you for your comment. Based on comments received, the Final EIS now has more discussion about impacts to Canada.

8. The United States does not have an established standard for PM2.5; thus it was not used in the air quality impact assessment. A Canada Wide Standard of 30 µg/m3 for PM2.5 was approved in June 2000 after the Draft EIS was published. Please see Letter 9, Response to Comment 1 for a discussion of potential PM2.5 impacts attributable to the proposed facility. Technical staff from the Canadian MELP concluded that it would be unlikely that emissions from the proposed facility would result in exceedance of the PM2.5 Canada Wide Standard.

9. As noted in Section 3.1 of the EIS, with the exception of ozone and PM10, observed pollutant concentrations at Abbotsford are lower than most stringent Canadian objectives. From 1996 to 1998, the maximum hourly ozone concentrations exceeded short-term Canadian Desirable Objectives. Similarly, existing PM10 concentrations sometimes exceed the 24-hour Greater Vancouver Regional District Interim Objective for PM10. Thus, prior to consideration of air quality impacts associated with the proposed project, existing air quality in the Lower Fraser Valley at times already exceeds Canadian standards and objectives. For a discussion of the incremental impact of the proposed project on air quality in Canada, please see Letter 3, Response to Comment 2.

10. Emission limits and enforcement of the operating permit would be the responsibility of the Energy Facility Site Evaluation Council and the U.S. Environmental Protection Agency.

11. The use of BACT technology would be a condition of the operating permit and would be incorporated into the design of the facility prior to construction. That is, if the facility was constructed, it would be built using BACT. Please see Letter 9, Response to Comment 5 for a discussion of the BACT process and how it would apply to the proposed project.

12. Please see Letter 49, Response to Comment 7 for a discussion of visibility impacts in Canada.

13. For the same size of facility, the combustion of natural gas results in much lower emissions of CO2 than the combustion of other fossil fuels, such as coal or oil. The combustion of natural gas is the most efficient means available for converting the energy in fossil fuels into electrical power. The gradual replacement of coal-fired and oil-fired plants with more efficient natural gas-fired turbine generating stations is one of the

national strategies to reduce greenhouse gas emissions. To the extent that the proposed facility may displace facilities that emit greater amounts of CO2 per megawatt of power, it may reduce overall greenhouse gas emissions.

14. Please see Letter 107, Response to Comment 13 (above) and Letter 65, Response to Comment 1.

15. Please see Letter 65, Response to Comment 1 for a discussion of potential greenhouse gas mitigation measures associated with the proposed project.

16. S2GF would be operated as a "merchant" plant. Thus, power could be sold to purchasers within and outside the Northwest region. The need for power is a complex subject and is addressed in several documents (e.g., Washington State Electricity System Study, Exhibit 28.4; 1999 Biennial Energy Report, Exhibit 28.3; Northwest Power Supply Adequacy/Reliability Study Phase I Report, Exhibit 42.2).

17. Please see General Response D, which describes measures that SE2 has proposed to mitigate impairment of water rights and residential wells that potentially could result from the increased groundwater pumping to supply water to this project.

18. Please see General Response E, which discusses mitigation measures for potential elevation of nitrate levels in the City of Sumas wells as a result of increased pumping.

19. Considering the minor changes in water levels that are expected to result from the increased pumping that would be required for this project, it is considered unlikely that land sinkage could occur. Therefore, this issue is not addressed in the Final EIS.

20. Please see General Response J for a discussion of flood impacts and potential mitigation measures.

21. The discussion of impacts in Chapter 3.2 of the EIS has been revised to provide further explanation of the significance of water resource impacts that would or potentially could result from this project. See also General Responses D through J.

22. Worst-case noise impacts are assessed at those locations closest to the noise source since this would be where the noise impacts would be greatest. Because noise attenuates (decreases) over distance, potential impacts on the Canadian side of the border would be less than those experienced at residential locations closer to the facility. Please see Letter 5, Response to Comment 9 for a discussion of noise impacts associated with the proposed facility.

23. S2GF would have a foam fire suppression system (Exhibit 27, Michael Woltersdorf Prefiled Testimony, pages 9 and 10). The foam system would be designed to smother any fire by spreading foam on top of the burning fuel and cutting off the supply of oxygen necessary for combustion to continue. If for some reason the foam suppression system did not put out a fire, the role of the local fire department would be to provide perimeter control so that nearby buildings or facilities would not ignite as a result of the radiated heat produced by a fire at the SE2 facility. SE2 proposes to provide the local fire

department with training and equipment appropriate for this function. SE2 would also explore arrangements with the nearby Whatcom County refineries to provide aid in the event of an emergency at the SE2 facility.

24. Emergency medical services in the vicinity of the project site are provided by primary response ambulance units and the local hospital. Ambulance units are operated through the local fire department. The only hospital in Whatcom County is St. Joseph's, which is located in Bellingham, approximately 24 miles from the site. It has 253 beds and maintains a Class 2 emergency room. While it is also possible that the hospital in Abbotsford could be used, for more serious medical emergencies, or if St. Joseph's has limited space, people could be sent to hospitals in Everett and Seattle.

25. Four trucks per hour is the maximum truck volume anticipated. It was assumed to determine the worst-case condition requirements.

26. The proposed 230 kV transmission line would be relatively quiet with regard to radio interference due to its double bundle conductor design. CSA Standard C108.3.1-1975 "Tolerable Limits and Methods of Measurement of Electromagnetic Noise from AC High Voltage Power Systems, 0.15-30 MHz" specifies that the fair weather interference field strength, measured at 15 meters laterally from the outermost conductor of the power line, shall not exceed 50 dB for 230 kV power lines. Using the configuration chosen for the proposed 230 kV line, it is expected that the radio interference (RI) level at 15 meters will be less than 20 dB during fair weather conditions. The RI level may increase by approximately 20 dB during rainy weather. Because buildings and roads are generally more than 15 meters from the proposed 230 kV line, it is anticipated that there will be few, if any, RI problems. RI problems can generally be mitigated by providing an antenna sufficiently far away from the closest energized conductor. One location that may require mitigation for RI is near Hazel Street where an AT&T building, an auto body shop, and a parking lot presently share the CP Rail ROW (Norecol Dames & Moore 1999).

27. See Letter 3, Response to Comment 4 for discussion of EMF health effects.

28. The wastewater from S2GF would consist predominantly of blowdown water from the cooling tower, the chemical makeup of which will be similar to that detailed for the SCCLP in Table 2.8-2 of the Application for Site Certification (page 2.8-3). A minor component of the waste will be sanitary waste from plant personnel use. Based on experience at the SCCLP, the wastewater streams from S2GF would comply with codes and regulations governing admission of wastes into public sewers.

29. EFSEC reviewed and accepted the Draft EIS and released it for public comment in March 2000. Based on the comments received, the Final EIS has been revised as appropriate.